

UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF GEORGIA  
ATLANTA DIVISION

HEAT TECHNOLOGIES, INC.,

Plaintiff,

vs.

PAPIERFABRIK AUGUST KOEHLER  
SE, MANFRED HUBER, JOACHIM  
UHL, LUTZ KÜHNE, and MICHAEL  
BOSCHERT,

Defendants.

PAPIERFABRIK AUGUST KOEHLER  
SE,

Counter Plaintiff,

Vs.

HEAT TECHNOLOGIES, INC. and  
ZINOVY PLAVNIK,

Counter Defendants.

Case No. 1:18-cv-01229-SDG

**CLAIM CONSTRUCTION REPORT AND RECOMMENDATION**

The Special Master submits this Report and Recommendation under the Court's September 9, 2020 Order Appointing Special Master [ECF 139]. The Court appointed the undersigned Special Master to preside over a claim construction hearing concerning

disputed claim terms in U.S. Patent Nos. 9,851,146 (“the ’146 Patent”) and 9,068,775 (“the ’775 Patent”).

Plaintiff Heat Technologies, Inc. and Counterclaim-Defendant Zinovy (Gene) Plavnik (collectively, “HTI”) submitted their opening claim construction brief on April 13, 2020 [ECF 113, “HTI’s Opening Brief”]. Counterclaim-Plaintiff Papierfabrik August Koehler SE and individually named defendants Manfred Huber, Joachim Uhl, Lutz Kühne, and Michael Boschert (collectively “Koehler”) submitted their opening claim construction brief the same day [ECF 112, “Koehler’s Opening Brief”]. On May 12, 2020, the parties submitted their respective responses [ECF 121, “HTI’s Response”; ECF 122, “Koehler’s Response”]. Also before the Special Master is the parties’ March 12, 2020 pre-briefing Joint Claim Construction Statement [ECF 103, “JCCS”]. The Special Master conducted a claim construction hearing on October 7, 2020. Based on the above-cited briefing and the oral arguments presented by counsel at that hearing, the Special Master recommends construing the disputed claim terms identified in the JCCS as set forth in this Report.

## **I. BACKGROUND AND THE PATENTS-IN-SUIT**

The at-issue patents are generally directed to ultrasonic drying technology. *See* ’146 Patent, Abstract; ’775 Patent, Abstract. The parties are not competitors—HTI is a

company focused on commercialization of heat and mass transfer technology and equipment whereas Koehler is a paper manufacturer.<sup>1</sup>

In 2012, Koehler purchased one of HTI's ultrasonic drying systems to dry its paper products.<sup>2</sup> After purchasing HTI's ultrasonic drying system, Koehler filed a patent application generally directed to technology for drying a web of fibrous material using ultrasonic drying technology.<sup>3</sup> That application eventually issued as the '146 Patent.<sup>4</sup> HTI contends that counterclaim-defendant Mr. Zinovy (Gene) Plavnik is the true inventor of the subject matter claimed by the '146 Patent, and that the subject matter of the '146 Patent's claims was previously disclosed in a different patent application filed by HTI that ultimately issued as the '775 Patent.<sup>5</sup> HTI initiated the present litigation asking the court, among other things, to correct the inventorship of the '146 Patent.<sup>6</sup> In its answer and counterclaim, Koehler denies that Mr. Plavnik invented the subject matter of the '146 Patent, or at best, he is merely a joint inventor.<sup>7</sup>

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<sup>1</sup> ECF 1 ("Complaint"), ¶¶ 1-2.

<sup>2</sup> Koehler's Opening Brief at 2.

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> Complaint, ¶ 29.

<sup>6</sup> *See generally*, Complaint.

<sup>7</sup> *See generally*, ECF 53, Answer and Counterclaims.

Koehler has also counterclaimed, among other things, that the claims of the '775 Patent are invalid.<sup>8</sup> Neither party has accused the other of patent infringement.

#### **A. The '146 Patent**

Materials such as paper are typically manufactured and processed in webs before being cut into individual sheets.<sup>9</sup> During manufacturing and post-processing, the webs are dried to bring their moisture content to a desired final value.<sup>10</sup> The '146 Patent relates to “a dryer section for drying a web of fibrous material, especially of paper, cardboard, tissue/sanitary paper.” *See, e.g.*, '146 Patent, Abstract; 8:48-50 (claim 1).

The '146 Patent explains:

The dryer section of a paper machine is arranged between the press section, which dewateres the material web in a mechanical manner, and a rolling apparatus, which rolls up the dried web. The dryer section has the object of thermally removing the moisture remaining in the web after the mechanical dewatering down to the desired final moisture content.

*Id.*, 1:12-18.

The '146 Patent describes that decreasing energy when drying the web is an important factor in the cost of paper production. *Id.*, 1:29-30. The '146 Patent explains that energy can be decreased, and cost reduced, using ultrasound technology while drying:

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<sup>8</sup> *Id.*

<sup>9</sup> HTI Opening Brief at 4.

<sup>10</sup> *Id.*

The improvement in the drying output is achieved by the ultrasound generator provided according to the invention, which is used to make the drying fluid leaving the nozzle of the drying unit vibrate. The acoustic vibrations of the drying fluid prevent or reduce the formation of an air cushion on the web to be dried, which would hinder the convection flow . . . the dryer section according to the invention is configured in such a way that the moisture content over the entire web thickness can be brought to the desired final moisture content, the reduction in the moisture content being able to be assisted by ultrasound.

*Id.*, 2:16-30.

The '146 Patent discloses that one way to configure a dryer section to reduce moisture content over the entire web thickness is to adjust the spacing between the outlet opening of the nozzle containing the drying fluid (such as air) and the surface of the web so that “the amplitude of the ultrasound vibration reaches its maximum approximately at the web surface.” *Id.*, 6:7-10; 2:35-44.

Fourteen of the fifteen at-issue claim terms are from the '146 Patent's claims.

## **B. The '775 Patent**

The '775 Patent generally relates to heating and drying technologies that use ultrasound, and the claims of the patent are specifically directed to a method for calibrating an apparatus for drying a material. '775 Patent, 1:6-8; 15:25-26; 15:49-50. Example applications include “printing, residential and commercial cooking appliances, food processing equipment, textiles, carpets, converting industries, fabric dyeing, and so on.” *Id.* at 5:45-47.

The '775 Patent discloses that one way to configure or adapt a dryer system is to adjust the distance between the outlet opening of the ultrasonic transducer and the surface of the material so that “when the ultrasonic oscillations 18 reach the interface surface of the material 20, they are at about maximum amplitude.” *Id.*, 8:9-13. The '775 Patent discloses that, in one embodiment, “a register surface” is used to fix this distance. *Id.*, 8:33-48. The claim term “register surface” is the only claim term at issue from the '775 Patent’s claims.

## II. LEGAL STANDARDS OF CLAIM CONSTRUCTION

The claims of a patent set forth the scope of the invention to which the patentee is entitled.<sup>11</sup> Claim construction is not only the first step in an infringement or validity analysis, it is also the first step in an inventorship analysis.<sup>12</sup> Claim construction “is a question of law, to be determined by the court.”<sup>13</sup>

A patent’s claim terms are “generally given their ordinary and customary meaning,” as would have been understood by a person of ordinary skill in the art as of the filing date of the application for patent.<sup>14</sup> Because the meaning of a claim term is often not immediately apparent, courts look to “those sources available to the public

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<sup>11</sup> *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005).

<sup>12</sup> *See Trovan, Ltd. v. Sokymat SA*, 299 F.3d 1292, 1302 (Fed. Cir. 2002).

<sup>13</sup> *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996) (quotations omitted).

<sup>14</sup> *Phillips*, 415 F.3d at 1315 (collecting cases).

that show what a person of skill in the art would have understood disputed claim language to mean” which includes, in order of importance, “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of the technical terms, and the state of the art.”<sup>15</sup>

Claim language is of “primary importance,” as it “provide[s] substantial guidance as to the meaning of particular claim terms.”<sup>16</sup> Thus, the context of a claim term, both in the asserted claim and in relation to other claims, “can be highly instructive.”<sup>17</sup> Claim construction must be conducted “with an eye toward giving effect to all terms in the claim.”<sup>18</sup> A claim construction rendering a claim term redundant or superfluous is to be avoided.<sup>19</sup>

While it is a “bedrock principle” that the claims of a patent define the invention, the specification plays a critical role in claim construction.<sup>20</sup> The Federal Circuit has

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<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 1312, 1314.

<sup>17</sup> *Id.* at 1314-15.

<sup>18</sup> *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006).

<sup>19</sup> *Warner-Lambert Co. v. Purepac Pharm. Co. (In re Gabapentin Patent Litig.)*, 503 F.3d 1254, 1263 (Fed. Cir. 2007).

<sup>20</sup> *Phillips*, 415 F.3d at 1313 (“the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”).

gone so far as to say that the specification is “the single best guide to the meaning of a disputed term.”<sup>21</sup> But, while the specification is important, the Federal Circuit has “cautioned against importing limitations from the specification into the claims.”<sup>22</sup>

Courts may also consider extrinsic evidence, *i.e.*, evidence external to the patent and prosecution history such as expert and inventor testimony, dictionaries, and treatises.<sup>23</sup> While such extrinsic evidence can be useful for a court, it less significant than the claims, specification, and file history.<sup>24</sup> Extrinsic evidence “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.”<sup>25</sup>

### III. PERSON OF ORDINARY SKILL IN THE ART

A “preliminary matter that the Court must address before engaging in a construction of the claims is the issue of the level of skill in the art applicable to the interpretation of the [patent].”<sup>26</sup> Neither HTI nor Koehler addressed the level of skill in their briefing. At the hearing, HTI proposed the level of skill for both patents as a:

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<sup>21</sup> *See id.* at 1315 (citations omitted).

<sup>22</sup> *Voda v. Cordis Corp.*, 536 F.3d 1311, 1320 (Fed. Cir. 2008) (quoting *Phillips*, 415 F.3d at 1323).

<sup>23</sup> *Phillips*, 415 F.3d at 1317.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.* at 1319.

<sup>26</sup> *Attic Tent, Inc. v. Copeland*, 627 F. Supp. 2d 635, 640 (W.D.N.C. Dec. 8, 2008) (citing *Ferguson Beauregard/Logic Controls, Div. of Dover Res., Inc. v. Mega Sys., LLC*, 350 F.3d 1327, 1338 (Fed. Cir. 2003)).



Bachelor's degree in mechanical engineering or a related field, and two or more years of experience in the development or design of drying systems, or the equivalent, including some experience with acoustic drying technology; additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.

For both patents, Koehler proposed:

Bachelor's degree in mechanical engineering, with a focus on pulp and paper engineering science, and several years of experience in the development, design, manufacturing, or operation of pulp and paper machines and their drying sections, including some basic understanding of acoustic drying or ultrasound principles. Additional graduate education in the pulp and paper engineering science field could substitute for professional experience, or significant experience in the field of pulp and paper engineering science or pulp and paper machines and their drying sections could substitute for formal education.

The proposals are similar in that they both require bachelor's degrees in mechanical engineering (or significant field experience), experience or graduate education in the design and development of drying systems, and some experience or understanding with acoustic drying technology. Koehler's proposed skill level, however, additionally requires experience with pulp and paper engineering science and pulp and paper machine dryer section design.

The Special Master recommends that the level of skill not require experience with pulp and paper engineering science or pulp and paper machine dryer section design. The focus of the claims for both patents is on the use of ultrasound while drying, not pulp or paper making. While the embodiments disclosed in the '146 Patent are in

the context of a paper machine, the improvement it offers is “achieved by the ultrasound generator provided according to the invention.” ’146 Patent, 2:16-17. The ’146 Patent claims require a “drying unit [that] has at least one ultrasound generator.” *Id.* 8:59-60; 10:31-32. The ’775 Patent makes only passing reference to paper products and is more focused on “calibrating an apparatus for drying a material.” ’775 Patent, 5:47-55. For these reasons, it would be inappropriate to require pulp and paper engineering science within the definition of the level skill for both patents since drying technology is their focus. Therefore, the Special Master recommends the following level of skill for the ’146 and ’775 patents:

**Bachelor’s degree in mechanical engineering or a related field, and several of experience in the development or design of drying systems, or the equivalent, including some experience with acoustic drying technology; additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.**

#### **IV. AGREED-TO TERMS POST HEARING**

After the hearing, the parties reached agreement on the claim terms below. The Special Master recommends these claim constructions to the Court.

<b>Claim Term</b>	<b>Agreed-To Construction</b>
“dewatering”	“to remove water from the web to a desired moisture content level”
“wrap region”	“region generally along the exterior periphery of a roller or cylinder where the web is touching the roller or cylinder”

Claim Term	Agreed-To Construction
“open draw”	“region where the web is under tension and between two web guide aids without contact to a transport means”

## V. RECOMMENDED CLAIM CONSTRUCTIONS FOR DISPUTED TERMS

Claim terms that at least one party contends require construction are set out below. The parties agree that all other terms do not require a specific construction and the jury should be informed these terms have their plain and ordinary meaning.

At the outset, there are a few themes in the parties’ proposed claim constructions that implicate key claim construction principles. Those principles are outlined here at a global level before discussing the specifics of each claim term.

*First*, “the context in which a term is used in the asserted claim can be highly instructive.”<sup>27</sup> Usage of a claim term in both the asserted and unasserted claims, and differences between claim terms, can be useful.<sup>28</sup> “For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”<sup>29</sup> As a corollary—and important to the Special Master’s recommendations below—courts avoid claim

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<sup>27</sup> *Phillips*, 415 F.3d at 1314.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 1314-15.

constructions that add limitations required by a dependent claim or render claim language superfluous.<sup>30</sup>

**Second**, many of the parties’ disputes highlight a tension between properly interpreting a patent’s claim in light of the specification and improperly importing limitations from the specification into the claim. Indeed, the Federal Circuit in *Phillips* indicated that “the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice.”<sup>31</sup> But, it can be done. For example, the Federal Circuit has repeatedly warned against confining claims to the specific embodiments disclosed in the specification or limiting claim terms to a single embodiment.<sup>32</sup> This is so not only because the Patent Act requires that the claims—not the specification—set forth a patent’s limits, “but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.”<sup>33</sup> In addition, “it is important to keep in mind that the purposes of the specification are to teach and enable those of skill the art to make and use the invention,” and one of the best ways to do so is to “provide an example of how to

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<sup>30</sup> See *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006).

<sup>31</sup> *Phillips*, 415 F.3d at 1323.

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

practice the invention in a particular case.”<sup>34</sup> As a result—and important the Special Master’s recommendations below—limitations from the specification should not be imported into claims via claim construction, even when the patent describes only one embodiment.<sup>35</sup>

In light of these two principles, the Special Master has strived to recommend claim constructions that avoid unnecessary language or add limitation to the claims.

**A. “dryer section” (’146 Patent)**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
“dryer section of a machine”	“The section of a machine for producing a web of fibrous material, i.e. a finished paper web, identified by Item 20 in FIG. 1 (excerpted below), which thermally removes moisture remaining in a web, such section being arranged after a press section, which dewateres the web mechanically, and before a size press and/or a coating unit and/or a smoothing unit and/or a device for rolling the dried web”	“dryer section of a machine”

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<sup>34</sup> *Id.*

<sup>35</sup> *See Phillips*, 415 F.3d at 1323 (“we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment”).

The parties agree that a “dryer section” is a “section of machine.” The Special Master has included this agreed-to aspect within its recommended construction of “dryer section.”

Koehler’s primary argument to support its proposed construction is that “dryer section,” as used in the claims, is a term of art of in the industry.<sup>36</sup> According to Koehler, the specification of the ’146 Patent relates to a very specific type of dryer section, and the proper construction of “dryer section” must reflect this. Koehler attacks HTI’s proposed construction because, according to Koehler, the “dryer section” cannot be simply a dryer section in any machine.<sup>37</sup> Rather, it must be part of a machine intended for drying a web of fibrous material.<sup>38</sup>

Among other arguments, HTI attacks Koehler’s proposed construction because it: (1) unnecessarily limits “dryer section” to paper making; (2) attempts to define “dryer section” with respect to other elements of a paper making machine; and (3) attempts to add numerous other structural components to the claim term described in the specification, but not explicitly claimed.<sup>39</sup> HTI argues there is a difference between

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<sup>36</sup> Koehler’s Opening Brief at 15.

<sup>37</sup> Koehler’s Reply at 6.

<sup>38</sup> *Id.*

<sup>39</sup> HTI’s Opening Brief at 10-11; HTI’s Reply at 7-8.

using examples of the invention to disclose how to make and use it versus language demonstrating that the claims are strictly coextensive with those examples.<sup>40</sup>

HTI has the better of this argument. Koehler has asked the Court to adopt a construction that would limit the claimed “dryer section” to a specific embodiment disclosed in the specification, but the Federal Circuit has expressly rejected that approach.<sup>41</sup> As HTI points out, the specification describes the invention using permissive and non-limiting language and specifically states that FIG. 1 (on which Koehler relies) “shows a dryer section 20 according to an *example according to the invention.*” ’146 Patent, 4:55-56. (emphasis added).

Koehler’s proposed construction is also problematic in that it would add limitations related to the relative position of the dryer section with respect to other portions of the machine, but those limitations are specifically claimed in dependent claims 11 and 12, and not specifically claimed in claim 1 (or claim 15):

11. A machine for producing a web of fibrous material comprising: a device for mechanically dewatering the web, with a press section; and a dryer section according to any one of the preceding claims, which is arranged downstream of the device for mechanically dewatering in a transport direction of the web.

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<sup>40</sup> HTI’s Reply at 8.

<sup>41</sup> *See Phillips*, 415 F.3d at 1323 (“we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment”).

12. The machine according to claim 11, wherein a size press or a coating unit or a smoothing unit or a device for rolling the web are arranged downstream of the dryer section.

'146 Patent, 9:37-10:4. Courts avoid claim constructions that add limitations required by a dependent claim or render claim language superfluous.<sup>42</sup> Koehler's proposed construction would do just that.

Koehler is correct that claims must be read in light of the specification, and Koehler's concern that HTI's proposed construction might broaden the scope of the claims to any machine is legitimate. But that concern is remedied by the claims themselves. For example, both independent claims 1 and 15 recite that the dryer section is "for drying a web of fibrous material, especially of paper, cardboard, tissue/sanitary paper," and that it comprises a "drying unit" that dries via convection drying (*i.e.*, thermally removing moisture). The at-issue claims are already limited to machines that dry webs of fibrous material thermally. There is no need to adopt a construction that adds these limitations a second time, and to do so would render the plain language of the claim unnecessary and superfluous.

Accordingly, the Special Master recommends the term "dryer section" be construed as **"dryer section of a machine."**

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<sup>42</sup> See *Curtiss-Wright Flow Control Corp.* 438 F.3d at 1380.



**B. “web” / “web of fibrous material” (’146 Patent)**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
<u>web</u> : “continuous sheet”	<u>web</u> : “A continuous sheet of unfinished paper web in-manufacture that is dried by the dryer section, as identified by Item 10 in the figures”	“continuous sheet comprising fibers”
<u>web of fibrous material</u> : “continuous sheet comprising natural fibers, synthetic fibers, or any combination thereof”	<u>web of fibrous material</u> : Used interchangeably with the term “paper web” and referring to a web of unfinished paper in-manufacture that is to be dried in the dryer section, as identified by Item 10 in the figures	

While the parties agree that both a “web” and a “web of fibrous material” are continuous sheets, they have different positions on whether these terms can be used interchangeably and how they should be further construed.

At the outset, the Special Master recommends construing the claim term “web” and “web of fibrous material” in the same way. On its face, this position seems to run afoul of the claim construction principle that “claims are interpreted with an eye toward giving effect to all terms in the claim.”<sup>43</sup> However, there are two other principles of claim construction suggesting that “web” and “web of fibrous material” should be construed the same.

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<sup>43</sup> See e.g., *Bicon*, 441 F.3d at 950.

First, the full phrase “web of fibrous material” appears only in the preamble of the at-issue claims, while the standalone “web” appears in limitations following the preamble. As “a general rule preamble language is not treated as limiting.”<sup>44</sup> While neither party directly addressed whether the preambles of the at-issue claims are limiting, interpreting “web of fibrous material” and “web” as one-and-the same is less problematic when the former is exclusively used in the preamble and assumed to be non-limiting and the latter is in the body of the claim and definitively limiting.

Second, but most important, the specification of the ’146 Patent uses the term “web” interchangeably and consistently with “web of fibrous material.” There is nothing in the specification to suggest that a “web”—as it is used within the context of the claims—is anything other than a “web of fibrous material.” The portion of the specification describing the drawings (*i.e.*, 4:55-8:46) does not use the phrase “web of fibrous material,” and only uses the term “web.” This portion also uses the term “web” in the same way that “web of fibrous material” is used in the portion of the specification before the brief description of drawings<sup>45</sup>, *i.e.*, as the object dried by the drying section of the invention. *See e.g.*, ’146 Patent, 1:40-46. (“The invention is therefore based on

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<sup>44</sup> *Arctic Cat Inc. v. GEP Power Prods., Inc.*, 919 F.3d 1320, 1327 (Fed. Cir. 2019).

<sup>45</sup> Unlike most patents, the ’146 Patent does not include headings identifying the Background, Brief Description of Drawings, and Detailed Description sections of the specification.

the object of disclosing a dryer section for drying a web of fibrous material, especially of paper, cardboard, tissue/sanitary paper, which is improved with respect to energy efficiency.”). Based on the specification’s usage of the term “web,” a person of ordinary skill in the art would not interpret it to mean anything other than a “web of fibrous material.”

During the hearing, HTI pointed to the specification’s single use of the term “carrier web” as evidence that a “web” and a “web of fibrous material” are different.<sup>46</sup> But, the sentence in which the specification uses the term “carrier web” shows it is more akin to a carrier or drying screen and not material being dried by the dryer section:

It is possible to guide a *carrier web*, such as a drying screen or a drying felt, between the drying units 11 and *the web 10* without the mode of action of the ultrasound-assisted drying units 11 being significantly impaired here. The drying screen is designated by the reference numeral 14b in FIG. 1 . . .

’146 Patent, 7:5-9.

While the term “web” might refer to something other than a web of fibrous material in the context of a “carrier web,” the “carrier web” described in the specification is not the same “web” referred to in the claims. In the claims, the term “web” refers to the object being dried, not the object carrying the claimed “web” through the dryer section.

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<sup>46</sup> Hearing Transcript, 75:14-22.

“Claim language must always be read in view of the written description.”<sup>47</sup> Here, the written description’s use of “web” is consistent, and interchangeable with, “web of fibrous materials.”

Moreover, HTI’s proposed construction of “web” as only a “continuous sheet” is too broad. While a web may be a continuous sheet, continuous sheets are not necessarily webs, either within the context of the specification or based on the plain and ordinary meaning of “web.” The plain and ordinary meaning of web is a set of interconnected elements, such as the threads of a spider web or nodes of computer network such as the World Wide Web. Construing “web” as merely a “continuous sheet” would strip the word “web” of its ordinary meaning. While the specification and claims of the ’146 Patent use “web” in a specific context different than its plain and ordinary meaning, that context suggests a continuous sheet having fibers, not simply a “continuous sheet” full stop. Here, a “web” is more than a continuous sheet, especially given how the specification uses the word “web” throughout to refer to a web of fibrous materials.

While the Special Master agrees with Koehler that “web” and “web of fibrous material” are interchangeable, and that HTI’s proposed construction is too broad, it does not agree that either a “web” or a “web of fibrous material” is limited to a paper

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<sup>47</sup> *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011).

web. The plain language of the claims at-issue recites “a web of fibrous material, especially of paper, cardboard, tissue/sanitary paper.” ’146 Patent, 8:48-50 (claim 1); 10:5-7 (claim 13); 10:20-22 (claim 15). The word “especially” in this phrase signals that while paper, cardboard, and tissue/sanitary paper are examples of a “web of fibrous material”—and perhaps the most common—a “web” or “web of fibrous materials” is not limited to these examples and certainly not limited to a paper web. While Koehler argues that the specification only refers to a paper web, the specification uses the same “especially” language of the claims. *Id.*, 1:51-55. Even if the specification only referred to a single embodiment, the Federal Circuit has “expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.”<sup>48</sup> Neither the claims nor the specification indicate that a “web” or a “web of fibrous material” be limited to a “paper web.”

Koehler’s proposed constructions for “web” and “web of fibrous material” also have the same issues as its proposed construction for “dryer section”—importing limitations from the specification into the claim (e.g., “unfinished paper”, “as identified by Item 10 in the figures”) or adding limitations that are redundant in light of what the claim already recites (e.g., “in-manufacture that is to be dried in the dryer section”).

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<sup>48</sup> *Phillips*, 415 F.3d at 1323.

See e.g., '146 Patent (claims 1 and 15 reciting “at least one drying unit for reducing moisture content of a web by means of convection drying”).

Accordingly, the Special Master recommends that “web” and “web of fibrous material” be construed as “**continuous sheet comprising fibers.**”

**C. “transport means” ('146 Patent)**

<b>HTI's Proposed Construction</b>	<b>Koehler's Proposed Construction</b>	<b>Special Master's Recommendation</b>
<i>This claim term should be governed by 35 U.S.C. § 112(6) (pre-AIA).</i>	<i>This claim term should be governed by 35 U.S.C. § 112(6) (pre-AIA).</i>	<i>This claim term should be governed by 35 U.S.C. § 112(6) (pre-AIA).</i>
Function: “to move the web relative to the at least one drying unit”	Function: “to move the web relative to the at least one drying unit in the dryer section”	Function: “to move the web relative to the at least one drying unit”
Structure: “guides, guide rollers, a carrier, a continuously moveable carrier, a conveyor belt, a screen belt, a wire mesh, a drying screen, a drying felt, a conveyor band, paper guide rollers, and vacuum rollers, and equivalents	Structure: “a continuously movable carrier or guide, namely, a conveyor band, a conveyor belt, a screen belt, a drying screen, a wire mesh, a guide roller, a paper guide roller, a vacuum roller, a cylinder, a roller, a drying felt, and equivalents” <sup>49</sup>	Structure: “guides, guide rollers, a carrier, a continuously moveable carrier, a conveyor belt, a screen belt, a wire mesh, a drying screen, a drying felt, a conveyor band, paper guide rollers, and vacuum rollers, cylinders, rollers, and equivalents”

<sup>49</sup> In the JCCS, its briefing, and at the hearing, Koehler proposed that the structure of the “transport means” claim term be construed as “a continuously movable carrier, such as a conveyor band, a conveyor belt, a screen belt, a wire mesh, paper guide rollers, vacuum rollers, cylinder, rolls, felt, belts or other carrier, and equivalents.” Following the hearing, Koehler amended its proposal for the structure as set forth in this Report via an October 14, 2020 email to the Special Master and HTI.

For the claim term “transport means,” the parties agree that the term is a means-plus-function claim term governed by 35 U.S.C. § 112, ¶ 6. A means-plus-function claim term is “expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”<sup>50</sup> Construction of a means-plus-function claim term has two steps: (1) the court identifies the claimed function; then (2) the court determines the corresponding structure, material, or acts described in the specification to which the claim term will be limited.<sup>51</sup>

As to function, the parties’ proposed construction only differs because Koehler’s requires that the transport means move the web relative to the at least one drying unit “in the dryer section.” There is no need to include this additional limitation in the construction because it is already implicit within the claim’s context of “transport means.” Both claims 1 and 15 are directed to “a dryer section . . . comprising: at least one drying unit . . . and transport means . . .” Since the claimed dryer section must have a “dryer unit,” the construction of “transport means” need not restate that the dryer unit is “in the dryer section.”

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<sup>50</sup> 35 U.S.C. § 112, ¶ 6 (pre-AIA).

<sup>51</sup> *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1363-64 (Fed. Cir. 2013).

As to corresponding structure, there is little meaningful difference between the post-hearing constructions proposed by the parties. They are shown below with identical terms (setting aside plurality) crossed out:

<b>HTI's Proposed Structure</b>	<b>Koehler's Proposed Structure</b>
<del>guides, guide rollers, a carrier, a continuously moveable carrier, a conveyor belt, a screen belt, a wire mesh, a drying screen, a drying felt, a conveyor band, paper guide rollers, and vacuum rollers, and equivalents</del>	<del>a continuously movable carrier or guide, namely, a conveyor band, a conveyor belt, a screen belt, a drying screen, a wire mesh, a guide roller, a paper guide roller, a vacuum roller, a cylinder, a roller, a drying felt, and equivalents</del>

One difference identified by Koehler at the hearing, and shown above, is the inclusion of “carrier” without the “continuously movable” modifier in HTI’s proposed construction.<sup>52</sup> Koehler argued that the transportation means must be “continuously movable” because it is moving the web, which is a continuous sheet.<sup>53</sup>

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<sup>52</sup> Hearing Transcript, 133:11-16.

<sup>53</sup> *Id.* at 134:16-23.



HTI argues in retort that the specification explicitly refers to the web being on a “carrier” that moves the web relative to the dryer section, without reference to a “*continuously movable* carrier.”<sup>54</sup> That portion of the specification states:

A further example of the arrangement of the drying units 11 is to assemble these in the region in which the web 10 is guided on a carrier 14a, 14b. The carrier may, for example, be a conveyor band, a conveyor belt, a screen belt, a wire mesh, paper guide rollers, vacuum rollers etc.

’146 Patent, 7:24-28. Another part of the specification states:

The transport means *preferably* have a continuously movable carrier for the web, wherein one or more ultrasound-assisted drying units are arranged in the region of the carrier. The carrier may, for example, be a conveyor belt, a screen belt or a wire mesh. *Other carriers are possible.*

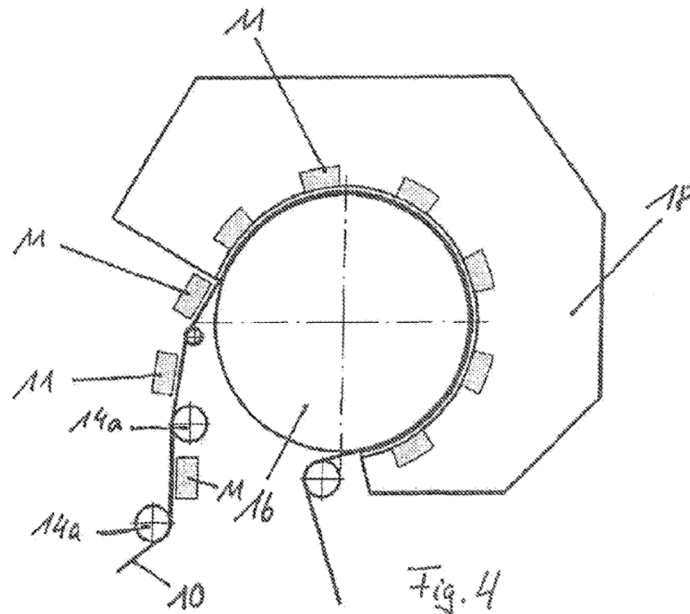
’146 Patent, 3:27-31 (emphasis added). Since the specification explicitly identifies “a carrier”—without the “continuously movable” modifier—as a structure that moves the web relative to the at least one drying unit, it should be included among the structures of the “transport means.” Also, the specification indicates that the transport means “preferably” has a continuously movable carrier, and that “other carriers are possible” indicating that not all described carriers and equivalents are “continuously movable.”

On a similar note, Koehler has additionally included “cylinder” and “roller” in its proposed construction for the structure of the “transport means.” If a “carrier 14a, 14b” is a “transport means” structure as argued by HTI, then a “cylinder” and a “roller”

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<sup>54</sup> See e.g., Hearing Transcript, 141:17-142:1.

would also be “transport means” structures. The specification specifically identifies “paper guide rollers,” and “vacuum rollers,” as examples of a “carrier 14a, 14b.” See ’146 Patent, 7:24-28. In addition, FIG. 4 (reproduced below) shows that carrier 14a, 14b are cylinders, and rollers are generally cylindrical.



Accordingly, the Special Master recommends that “transport means” have a function of **“to move the web relative to the at least one drying unit in the dryer section”** and a structure of **“guides, guide rollers, a carrier, a continuously moveable carrier, a conveyor belt, a screen belt, a wire mesh, a drying screen, a drying felt, a conveyor band, paper guide rollers, and vacuum rollers, cylinders, rollers, and equivalents.”**

**D. “reduction in moisture content” (’146 Patent)**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
“the quantity of moisture is reduced”	“reducing moisture content in the web in the dryer section until it is at least within a range from about 2% to 15%”	“the quantity of moisture is reduced”

Koehler’s proposed construction for “reduction in moisture content” has many of the issues discussed above regarding “dryer section,” “web,” and “web of fibrous material.” It imports an unclaimed limitation from the specification by reciting “until it is at least within a range from about 2% to 15%.” And, it includes unnecessary and repetitive language already present in the claim when considering the claim term within its context by reciting “in the web in the dryer section.”

Regarding the range language, Koehler offers little other than to cite to a portion of the specification that describes these ranges for a particular embodiment and arguing that the reduction in moisture must be “significant.”<sup>55</sup> One of the primary tenants of claim construction is that “unless required by the specification, limitations that do not otherwise appear in the claims should not be imported into the claims.”<sup>56</sup> Here, the ’146

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<sup>55</sup> Hearing Transcript, 94:7-15.

<sup>56</sup> *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1348 (Fed. Cir. 2005).

Patent's specification does not *require* the range Koehler advocates and uses broad language such as "may" and "especially" when describing the 2% to 15% range, indicating that this range is not necessarily required:

The object of the dryer section 20 is to bring the paper web taken over by the press section to the desired final moisture content. The final moisture content may be in a range from about 2 to 15%, especially in a range from about 2 to 10%, especially about 2 to 8%, especially about 2 to 6%, especially about 2 to 4%.

'146 Patent, 5:3-8.

In addition, Koehler's inclusion of "in the web in the dryer section" within its proposed construction is unnecessary given the term's context within the claims. Claim 1 recites that "the at least one drying unit [of the dryer section] is adapted in such a way . . . that reduction in the moisture content over an entire web thickness can be assisted by ultrasound." Claim 13 recites "moving the web through a dryer section; and drying the web convectively to reduce moisture content of the web . . . in such a way that reduction in moisture content over an entire web thickness is assisted by ultrasound." The claims already require reduction of moisture content to occur "in the dryer section." There is no need to repeat this limitation again in the claim construction of "reduction in moisture content."

Once this language is removed from Koehler's proposed construction, the Special Master is left with "reducing moisture content" which is essentially the same as "the quantity of moisture is reduced" as proposed by HTI. Accordingly, the Special

Master recommends that “reduction in moisture content” be construed as “**the quantity of moisture is reduced.**”

**E. “guide rollers” | “conveyor belt” | “screen belt” | “wire mesh” (’146 Patent)**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
Plain meaning; no construction necessary.	<p><u>guide rollers</u>: a type of transport means in a dryer section consisting of cylindrical powered or nonpowered rollers, which are also referred to as “guides”</p> <p><u>conveyor belt</u>: “a type of transport means in a dryer section, consisting of a continuously moving belt in the ordinary sense of that term”</p> <p><u>screen belt</u>: “a type of transport means in a dryer section, consisting of a continuously moving belt in the ordinary sense of that term, wherein the belts are composed of relatively open textile, single-layer, 1.5-layer or two-layer fabrics made of multifilament or monofilament threads or wires and also functions as a dryer sieve”</p> <p><u>wire mesh</u>: “a type of transport means in a dryer section, consisting of a continuously moving belt in the ordinary sense of that term, wherein the belts are composed of relatively open, single-layer, 1.5-layer or two-layer fabrics made of multifilament or monofilament wires and which also functions as a dryer sieve</p>	Plain meaning; no construction necessary

At a high level, Koehler puts forth two primary arguments for its claim constructions for “guide rollers,” “conveyor belt,” “screen belt,” and “wire mesh.” The first is that each term is a technical term for which a factfinder will need the guidance of a specific claim construction. The second is that it is improper to rely on a plain and ordinary meaning construction for these terms because a “court commits error when it fails to construe a disputed term on the basis that it has a well-understood meaning.”<sup>57</sup> Koehler cites to *O2 Micro International Limited v. Beyond Innovation Technology Company, Ltd.*, for this proposition.<sup>58</sup> 521 F.3d 1351, 1361 (Fed. Cir. 2008).

As to whether “guide rollers,” “conveyor belt,” “screen belt,” and “wire mesh” are technical terms, HTI argues in retort that Koehler has failed to overcome the “heavy presumption” that a claim term carries its ordinary and customary meaning, the “heavy presumption” cannot be overcome by pointing to a preferred embodiment disclosed in the specification, and it is improper to restrictively construe terms that do not have a specialized meaning ascertainable from the specification.<sup>59</sup> The Special Master agrees. All Koehler has offered on these terms is unsupported attorney argument that they are technical and that a factfinder would not understand them. The Special Master believes

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<sup>57</sup> Koehler’s Opening Brief at 30.

<sup>58</sup> *O2 Micro Int’l Ltd. v Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008).

<sup>59</sup> HTI’s Response at 18-19 (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366-69 (Fed. Cir. 2002)).

a factfinder will have no trouble understanding what these terms mean based on their ordinary and customary meaning. These are not technical terms, and the evidence provided by Koehler does not show otherwise.

The Special Master also agrees with HTI that *O2 Micro* is inapposite. Defendants' interpretation of *O2 Micro* is essentially that if there is dispute over the claim construction of a claim term, the Court must issue a specific claim construction, *i.e.*, one other than "plain and ordinary meaning." *O2 Micro* does not so hold. Instead, *O2 Micro* stands for the proposition that a "plain and ordinary meaning" construction may be inadequate when reliance on a term's "ordinary meaning" does not resolve the parties' **primary** disputes, such as infringement, validity, or inventorship (as is the case here).<sup>60</sup>

At the hearing, when the Special Master asked Koehler to identify the dispute requiring a specific construction of "guide rollers," "conveyor belt," "screen belt," and "wire mesh," it could not do so. Instead, it argued that a dispute had not "materialized yet" because the parties were not at summary judgment or trial, and that it "wants the terms construed the right way to set the metes and bounds of the invention" to resolve

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<sup>60</sup> *O2 Micro Int'l Ltd.*, 521 F.3d at 1361.

the inventorship dispute between the parties.<sup>61</sup> Koehler could not articulate why the question of inventorship would turn on construing these terms.

Yet, this case has been pending for over two years and the parties are roughly a year into fact discovery. If Koehler wants to rely on *O2 Micro* it should be able to identify at least one specific issue of inventorship that would require a construction for “guide rollers,” “conveyor belt,” “screen belt,” or “wire mesh” beyond “plain and ordinary meaning.” That it cannot undercuts its argument that *O2 Micro* applies.

Accordingly, the Special Master recommends each of “guide rollers,” “conveyor belt,” “screen belt,” or “wire mesh” be given their **plain and ordinary meaning**.

**F. “size press” (’146 Patent)**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
“unit used to apply a sizing agent to the web”	“apparatus that is typically downstream from a dryer section, consisting of two rollers through which dried web is guided through two rollers for application of starch, color, or other chemical solutions”	“unit used to apply a sizing agent to the web”

Unlike the terms discussed in the previous section, both parties agree that a “size press” is a special term that requires a specific claim construction and that it refers to a

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<sup>61</sup> Hearing Transcript, 149:20-150:5.



component that can be used in the paper making process.<sup>62</sup> The parties also seem to agree that a “size press” is used to apply sizing agent to a web.<sup>63</sup> The dispute between the parties, therefore, hinges on whether the proper claim construction of “size press” must include it being “typically downstream from a dryer section,” and “consisting of two rollers through which dried web is guided.”

Koehler argues these two limitations must be included in the claim construction because the location of the size press within the machine and its specific function are important. In support of its position, Koehler relies on the embodiments disclosed in the specification of the ’146 Patent and a third-party patent not considered by the Patent Office while the ’146 Patent was pending. While Koehler’s evidence may support that *some embodiments* of size presses are “downstream from a dryer section” and have “two rollers through which dried web is guided,” it has not provided compelling evidence that *all* size presses have these features, or that the claimed size press must have these features.

That the ’146 Patent, or an unrelated third-party patent, describes a particular embodiment of a size press does not lead to a claim construction limited to that specific

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<sup>62</sup> See HTI’s Opening Brief at 22; Koehler’s Opening Brief at 38.

<sup>63</sup> See Koehler’s Opening Brief at 38 (“it is true that a ‘size press’ is used to apply sizing agent to a web”).

embodiment.<sup>64</sup> The Special Master cannot recommend importing limitations from the specification or extrinsic evidence into this claim term.

Finally, Koehler’s concern about the importance of the location of the size press is resolved by the specific language of claim 12, the only claim where the “size press” appears. Claim 12 recites “wherein a size press or a coating unit or a smoothing unit or a device for rolling the web *are arranged downstream of the dryer section.*” (emphasis added). There is no need to add the limitation of “typically downstream from a dryer section” to the construction of “size press” given that claim already requires the size press to be downstream of the dryer section.

The Special Master recommends that “size press” be construed as “**unit used to apply a sizing agent to the web.**”

**G. “smoothing unit”**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
Plain meaning; no construction necessary	“apparatus that is typically downstream from a dryer section, in which the paper web passes through one or more nips between rollers, in which the paper web is compressed and is intended to take on the smooth surface of the rollers”	Plain meaning; no construction necessary

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<sup>64</sup> See *Phillips*, 415 F.3d at 1323 (“we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment”).

Koehler argues that a “plain and ordinary meaning” construction for “smoothing unit” is not appropriate because it is a technical term, not specifically defined in the specification, and like “size press,” the downstream location of a “smoothing unit” is inherent with the meaning of the term.<sup>65</sup> Koehler cites to U.S. Patent No. 7,871,496—extrinsic evidence—as support for its construction because it describes various types of smoothing units. Koehler also attacks HTI for offering plain and ordinary meaning because such a construction would not aid the factfinder in resolving the parties’ dispute, citing again to *O2 Micro*.<sup>66</sup>

HTI argues that the specification of the ’146 Patent does not indicate this term has a special meaning, or multiple meanings, so Koehler has not overcome the heavy presumption that claim terms be given their ordinary and customary meaning.<sup>67</sup> HTI also objects to Koehler incorporating limitations found elsewhere in the claims and relying on what HTI’s describes as “unhelpful evidence.”

Like with “sizing press,” the term “smoothing unit” appears in claim 12 which explicitly recites “wherein a size press or a coating unit or a smoothing unit or a device for rolling the web are arranged downstream of the dryer section.” Claim 12 explicitly

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<sup>65</sup> Hearing Transcript 183:11-16.

<sup>66</sup> Koehler’s Opening Brief at 40.

<sup>67</sup> HTI’s Opening Brief at 23.

requires the smoothing unit to be downstream of the dryer section, and there is no need to restate this within the construction of “smoothing unit.”

Koehler’s use of a new specialized term in its construction—“nips”—is problematic. The word “nips” is not found in the ’146 Patent, it is unclear what this means without further elaboration, and the parties had difficulty explaining what “nips” are at the hearing:

SPECIAL MASTER: And with respect to smoothing unit, the word “nip” is not familiar to me. What does the term “nip” mean in your proposed construction?

MR. DESAI [Koehler]: It's hard to explain. I'm trying to recall as it was explained to me. Essentially, the function is, again, to smooth the web. It's somewhat of a piece that sticks out to, again, force the web together and smooth it all the way out . . .

MS. MULLALLY [HTI]: I don't remember it being in the specification. But, again, I recall it is a term of art. I don't think it appears in the patent, but it basically is where two opposing rollers usually meet.<sup>68</sup>

On the one hand, Koehler has attacked HTI for not proposing a construction that would be helpful to the factfinder, but on the other, has itself proposed an unhelpful construction by introducing a new term of art not found or defined in the specification.

Ultimately, a factfinder should be able to determine the meaning of a “smoothing unit” from its plain and ordinary meaning—it is a unit that smooths. While the embodiment of the ’146 Patent, and Koehler’s cited-to extrinsic evidence, may

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<sup>68</sup> Hearing Transcript, 185:20-186:20.

describe smoothing units that include the structural limitations of its proposed construction, those structural limitations were not specifically claimed. It would be inappropriate for the Special Master to recommend a claim construction importing specific structural limitations from the specification or extrinsic evidence when neither the context of the claim nor the specification requires it.

Accordingly, the Special Master recommends that “smoothing unit” be given its **plain and ordinary meaning**.

#### **H. “register surface”**

<b>HTI’s Proposed Construction</b>	<b>Koehler’s Proposed Construction</b>	<b>Special Master’s Recommendation</b>
surface used for proper relative positioning	“A calibration surface that holds the material being dried away from the transducer at a fixed distance”	“surface used for proper relative placement”

Unlike the other claim terms in dispute, the term “register surface” appears in dependent claims 3 and 4 of the ’775 Patent. Both claims are directed to a “method of calibrating an apparatus for drying a material,” (*see* ’775 Patent, 16:10-16) and are reproduced below.

3. The method of claim 1, further comprising positioning a register surface for supporting the material the spaced distance from the ultrasonic transducer outlet.

4. The method of claim 3, further comprising supporting the material the spaced distance from the ultrasonic transducer outlet with a register surface.

From the context of the claims, the “register surface” is a surface used to support a material being dried a “spaced distance” from an ultrasonic transducer outlet. The claim term “spaced distance” is in claim 1, from which both claims 3 and 4 depend, and it is calculated “using the formula  $(\lambda)(n/4)$ .” ’775 Patent, 15:34 (claim 1).

The context of the claims obviates much of what Koehler proposes. For example, there is no need to include “holds the material being dried away from the transducer at a fixed distance” in the construction of “register surface” because the claim already states that the “register surface” is “for supporting the material the spaced distance from the ultrasonic transducer outlet.” To replace the language of the claims with Koehler’s language—which is similar, though not the same—is potentially confusing and unnecessary.

After accounting for the language already present in the claims the only major issue left to resolve on this term is whether Koehler’s inclusion of the word “calibration” as a clarification of the word “register” is appropriate. While the parties appear to agree that some clarity on the meaning of “register” is warranted, HTI objects to Koehler’s use of “calibration” as a substitute for “register.”<sup>69</sup>

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<sup>69</sup> HTI’s Response at 28.

Koehler argues that it proposed “calibration” because it provides a meaningful understanding of “register” within the context of the ’775 Patent and its claims.<sup>70</sup> According to HTI, using “calibration” when referring to the “register surface” could cause confusion because the claims as a whole are directed to a method of “calibrating,” and the activity of “calibrating” includes other claimed steps having nothing to do with the “register surface.”<sup>71</sup> While this confusion may be minimal, the Special Master agrees with HTI that “calibration” is not “quite the right fit” because of its use elsewhere in the claim.<sup>72</sup> It would be more helpful to the factfinder to construe “register surface” without using words that already appear in the claim for another purpose.

HTI cites to a dictionary definition of register—“a condition of correct alignment or proper relative position”—as the source of its proposed claim language.<sup>73</sup> “Dictionaries or comparable sources are often useful to assist in understanding the commonly understood meaning of words.”<sup>74</sup> But a dictionary definition cannot be “used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.”<sup>75</sup> Here, HTI’s cited-to dictionary definition does not contradict the ’775

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<sup>70</sup> See e.g., Hearing Transcript, 192:8-13.

<sup>71</sup> Hearing Transcript, 197:17-198:8.

<sup>72</sup> *Id.*

<sup>73</sup> HTI’s Opening Brief at 23, Ex. 5.

<sup>74</sup> *Phillips*, 415 F.3d at 1323.

<sup>75</sup> *Id.* at 1324.

Patent's specification, provides clarity to the word "register" within the context of the claims and the specification, and is a good starting point for construing "register surface."

That said, HTI's proposed construction also suffers from a problem like Koehler's use of "calibrating" as it uses a word already in the claim. If HTI's proposed construction were substituted into claim 3, it would read "positioning a [surface used for proper relative positioning] for supporting the material." The double use of "positioning" in two contexts is confusing, and again is not "quite the right fit."

Accordingly, the Special Master recommends that "register surface" be construed as **"surface used for proper relative placement."**

## VI. CONCLUSION

The Special Master recommends that the in-dispute claim terms be construed as set forth above.

Dated: November 10, 2020



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